

REMARKS

Favorable reconsideration of this application, in light of the preceding amendments and the following discussion, is respectfully requested.

Claims 1, 2, and 4-12 are pending in this application. Claims 1, 2 and 6 are amended; claim 3 is cancelled; and claims 7-12 are newly added by this amendment.

Applicant notes with appreciation the Examiner's indication on the Office Action Summary that all the priority documents have been received by the United States Patent and Trademark Office (USPTO).

Applicant also respectfully notes that the present Action does not indicate that the drawings have been accepted by the Examiner. The Applicant respectfully requests that the Examiner's next communication include an indication as to the acceptability of the filed drawings or as to any perceived deficiencies so that the Applicant may have a full and fair opportunity to submit appropriate amendments and/or corrections to the drawings.

Allowable Subject Matter

Applicant notes with appreciation the indication that claim 3 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim Rejections Under 35 U.S.C. § 103

Claims 1, 2 and 4-6 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Kida (U.S. Patent No. 6,823,152) in view of Jung (U.S. Patent No. 6,542,703). Applicant respectfully traverses this rejection for the reason detailed below.

As shown in the preceding amendments, independent claim 1 is amended to include the features of original dependent claim 3, which was indicated as including allowable subject on

page 3, lines 12-14 of the Office Action mailed March 8, 2005. Accordingly, Applicant respectfully submits that independent claim 1 and claims 2 and 4-6, depending therefrom, are patentably distinguished over the cited references of Kida and Jung.

Therefore, Applicant respectfully requests that the rejections to claims 1, 2, and 4-6 under 35 U.S.C. § 103(a) be withdrawn.

New Claims

New claims 7-11 are similar in subject matter to original claims 1-6 and therefore, will be discussed with respect to the cited references of Kida and Jung and the rejections to original claims 1, 2 and 4-6.

New independent claim 7 recites an image forming device including a transfer body cleaning device. The transfer body cleaning device includes “a transfer body resistance detecting section which detects and outputs a value of an electrical resistance of the contact transfer body changing according to humidity and temperature environment; and a cleaning bias control section which changes in applying time of the transfer cleaning bias based on a detection output signal from the transfer body resistance detecting section.”

According to example embodiments of the present invention, the variation of the electrical resistance may be detected by the transfer body resistance detecting section, and the applying time of the transfer cleaning bias may be varied by the cleaning bias control section based on the detected result.¹ For example, if the operating environment varies to a high temperature condition and/or a high humidity condition, the electrical resistance of the contact transfer body may decrease and the discharge current from the contact transfer body may increase, which may cause the discharge current from the transfer cleaning bias to become

¹ Applicant's specification, page 13, lines 6-11.

excessively large.² However, according to example embodiments of the present invention described in the specification, the applying time of the transfer cleaning bias may be shortened by the cleaning bias control section, and thus the continuation of an overdischarged condition may be avoided and the service life of an image carrier may be increased.

Applicant respectfully submits that neither Kida nor Jung, either alone or in any proper combination, disclose, teach or suggest an image forming device including “a transfer body resistance detecting section which detects and outputs a value of an electrical resistance of the contact transfer body changing according to humidity and temperature environment; and a cleaning bias control section which changes in applying time of the transfer cleaning bias based on a detection output signal from the transfer body resistance detecting section,” as recited in new claim 7.

Kida describes an image forming apparatus that includes a transferring body for transferring a toner image on a photoreceptor to a transferring member, a photosensor for “detecting at least either (a) concentration of a test toner image formed on the photoreceptor or (b) an amount of toner adhering to the transferring body,” bias applying means and controlling means for controlling the bias applying means in accordance with a detection value from the photosensor based on (a) or (b) above. However, Kida “fails to disclose the detecting unit for detecting the temperature/humidity by detects a value of an electrical resistance of the contact transfer body,” as acknowledged by the Examiner on page 3, lines 1-2 of the Office Action mailed March 8, 2005.

The Examiner states on page 3, lines 3-5 that Jung discloses a temperature/humidity detecting unit measuring the resistance value of the contact transfer body and therefore cures the

² Applicant's specification, page 13, lines 11-14.

above deficiency of Kida. In particular, the Examiner states "it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the temperature & humidity measuring device of Jung to the apparatus of Kida to prevent deterioration of the print image due to the change in the environment condition around the image forming apparatus."³

However, Applicant respectfully notes that the method for improving the print quality of an image forming apparatus described in Jung is directed to "controlling the print speed of the image forming apparatus in case that the environment condition is at a low temperature and a low humidity when checked at the non-image stage of the apparatus."

With respect to the combination of Kida and Jung used to reject originally filed claims 1, 2 and 4-6, Applicant respectfully submits that the combination is improper for at least the following reasons. Applicant respectfully submits that there is insufficient evidence in the record for modifying the image forming apparatus of Kida to incorporate the method for checking the environment condition around the image forming apparatus of Jung, which is used to control the print speed of the image forming apparatus. Further, Applicant respectfully submits that an attempt to bring in the isolated teachings of Jung described above into the image forming apparatus of Kida would amount to improperly picking and choosing from different references without regard to the teachings of the references as a whole.⁴

³ Office Action mailed March 8, 2005, page 3, lines 7-10.

⁴ See In re Ehrreich 590 F2d 902, 200 USPQ 504 (CCPA, 1979) (stating that patentability must be addressed "in terms of what would have been obvious to one of ordinary skill in the art at the time the invention was made in view of the sum of all the relevant teachings in the art, not in view of first one and then another of the isolated teachings in the art," and that one "must consider the entirety of the disclosure made by the references, and avoid combining them indiscriminately.").

Therefore, Applicant respectfully submits that Kida and Jung may not properly be combined as was done in the rejection to originally filed claims 1, 2 and 4-6.

In light of the above-identified patentably distinguishing features of new independent claim 7 and the lack of motivation and indication that Kida and Jung are combinable, Applicant respectfully submits new independent claim 7 and new claims 8-11, depending therefrom, are allowable over Kida and Jung.

With respect to new independent claim 12, Applicant respectfully notes that the subject matter indicated as allowable on page 3, lines 16-18 of the Office Action mailed March 8, 2005 has been incorporated into new claim 12.

Therefore, Applicant respectfully submits that new claim 12 is also allowable over the cited references of record.

CONCLUSION

Accordingly, in view of the above amendments and remarks, reconsideration of the objections and rejections and allowance of each of claims 1-2 and 4-12 in connection with the present application is earnestly solicited.

Pursuant to 37 C.F.R. §§ 1.17 and 1.136(a), Applicant(s) hereby petition(s) for a three (3) month extension of time for filing a reply to the outstanding Office Action and submit the required \$1,020.00 extension fee herewith.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact John A. Castellano at the telephone number of the undersigned below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any

additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

HARNESS, DICKEY, & PIERCE, P.L.C.

By 
John A. Castellano, Reg. No. 35,094 J 16 34,313

P.O. Box 8910
Reston, Virginia 20195
(703) 668-8000

JAC/SAE/pw